

IN THE DRAWINGS

Figure 1 has the designation "Prior Art" added as well as "REPLACEMENT SHEET" in the header.

Attachment: Replacement Sheet FIG. 1.

REMARKS

The present amendment is responsive to the Office Action dated April 28, 2009. Claims 1-2, 5-9, 12 and 14 have been amended. No new matter has been introduced by these amendments. Thus, claims 1-16 are again presented for consideration in view of the following remarks.

As an initial matter, FIG. 1 was objected to with a request that it be labeled "Prior Art." As noted above, a replacement sheet is submitted herewith including this label. Therefore, applicant requests that the objection be withdrawn.

Claims 1-16 have been rejected as being unpatentable under 35 U.S.C. § 112, second paragraph as being indefinite. Applicant respectfully traverses the rejection. In view of the amendments set forth above, applicant submits that the § 112, second paragraph rejections have been overcome. Support for the amendments may be found, by way of example only, in specification paragraphs 0136-0155, 0203-0204, 0226-0229 and 0244-0245 of the published application. Therefore, applicant respectfully requests that the rejection be withdrawn.

Claims 1-3, 10, 12, and 14-16 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Publication No. 2002/0014239 ("*Chalvignac*") in view of U.S. Patent No. 3,961,627 ("*Ernst*"). Of these, claims 1, 12 and 14 are independent. Applicant respectfully traverses the rejection.

Applicant submits that the combination of *Chalvignac* and *Ernst* does not teach or otherwise suggest all the limitations of the independent claims or their associated dependent claims.

A counterpart of *Chalvignac* (French patent application FR2812203) is described in the prior art of the present application (see paragraph 0011 of the published application). *Chalvignac* is in the same technical field as the present application, as it is directed to an apparatus for assistance for venting a patient. However, *Chalvignac* does not disclose several features which are set forth in claim 1.

The Examiner relies mainly in his arguments on the apparatus of Figure 1, which is a prior art apparatus described in *Chalvignac*. However, the apparatus of Figure 1 does not comprise a comparator configured for transmitting an operating reference value of a gas related parameter to the pressurized respiratory gas source for the control of said gas source operation between or during the inhalation and expiratory phases.

The passage in paragraph 0024 of *Chalvignac*, cited in the rejection, concerns the operation of the apparatus of Figure 2 of *Chalvignac* in a volumetric mode. In this volumetric mode, no comparator transmits a reference value of a gas related parameter to a pressurized respiratory gas source, but an open loop control of the pressure at the outlet of the gas source is made. See paragraph 0123. In addition, this volumetric mode relies on the control of the rotary spool of the valve, and not of the gas source.

This difference has already been pointed out in the present patent application. See specification paragraphs 0168-0170 of applicant's published application. *Chalvignac* does not disclose a comparator having an input being connected to a switch configured for the real time selective connection of the comparator with the pressure sensor or the flow rate sensor, allowing the real time transmission of a pressure signal or flow rate signal.

Chalvignac does not disclose either a switch whose position determines a barometric or volumetric mode of the apparatus, said switch being controlled by an automatic control unit, distinct from the comparator. These differences provide several advantages in the claimed invention, which include a great precision of the control of the apparatus, in particular for a wide range of flow rates, the real time selection of the nature (pressure or flow rate) of the parameter from which the operating reference value of the gas source will be defined (see paragraphs 0160 and 0165-0167 of the published application), and a real time control of barometric and volumetric modes.

Taking *Chalvignac* as a starting point, one would need to add and adapt many additional components in order to arrive at the claimed invention. If one of ordinary skill in the art were to try to combine *Chalvignac* with *Ernst*, it would not result in the claimed invention.

In *Ernst*, there is admittedly a closed loop regulation in a respirator (see *Ernst*, Figure 1). However, the pressure or flow control is carried out on the control valve (4), and not on the source of respiration gas (2). This derives clearly from Figure 1 of *Ernst*, where as best understood the source of respiration gas appears not to be controlled.

Furthermore, the comparator (7) in *Ernst* does not send a reference value to the source of respiration gas, but a control signal to the control valve (4) through a valve control (6) for modulating said control valve (4) (see column 4, lines 1-9 and Figure 1). Thus, even if one of ordinary skill in the art would have been properly motivated to combine *Chalvignac* and *Ernst*, he would not have arrived at the claimed invention as set forth in claim 1. In particular, *Ernst* would not have incited him to control the gas source itself. Therefore, applicant respectfully submits that independent claim 1 is not obvious over the applied combination.

Independent claim 12 includes the structural features recited in claim 1. For at least the reasons presented above, claim 12 is patentable over the applied combination of *Chalvignac* and *Ernst*. In addition, claim 12 describes the operation of a micro turbine and closing the expiratory valve based on the micro-turbine to regulate a positive expiratory pressure during the expiratory phases.

The use of a micro turbine is very advantageous. By way of example only, it does not generate unwanted side effects (e.g., vibrations, operating anomalies), and thus permits the device to dispense with additional means (filters) that are usually positioned between the auxiliary pressure source and the expiratory valve (see specification paragraphs 0192 and 0193 in the published application).

Chalvignac does not disclose or suggest the use of a micro turbine, but instead describes a fan (see paragraph 0043 of *Chalvignac*), which is a common auxiliary pressure source. *Ernst* does not teach or suggest the use of a micro turbine as claimed. None of the other cited documents describe a micro turbine as claimed in the context of the invention. Thus, applicant submits that independent claim 12 is further patentable over the applied combination for these additional reasons.

Turning to independent claim 14, this claim also includes the structural features of claim 1. For at least the reasons presented above, claim 14 is patentable over the applied combination of *Chalvignac* and *Ernst*.

In addition, claim 14 describes the control of the gas source in a volumetric mode. In this process, the closed loop made by the flow rate sensor, the comparator, and the controlled pressurized gas source, allows the control of the pressurized gas source through an operating reference value (flow value in the volumetric mode) transmitted by the comparator to said pressurized gas source. Applicant submits that the applied combination of *Chalvignac* and *Ernst* does not teach or otherwise suggest such limitations.

For at least the reasons presented above, applicant submits that independent claims 1, 12 and 14 are patentable over the applied combination. Furthermore, claims 2-3, 10, and 15-16 depend from independent claims 1, 12 and 14, respectively, and contain all the limitations thereof. For at least this reason, applicant submits that the subject dependent claims are patentable over the applied combination.

Claims 4-6 were rejected under 35 U.S.C. § 103(a) as being obvious over *Chalvignac* in view of *Ernst* as applied to claim 1 on page four (4) of the Office Action, further in view of U.S. Patent No. 5,307,795 ("*Whitwam*"). Claims 7-10 were rejected under 35 U.S.C. § 103(a) as being obvious over *Chalvignac* in view of *Ernst* as applied to claim 1 on page four (4) of the Office Action, further in view of U.S. Patent No.

5,308,040 ("Torres"). Claim 11 was rejected under 35 U.S.C. § 103(a) as being obvious over *Chalvignac* in view of *Ernst* as applied to claim 10 on page six (6) of the Office Action, further in view of U.S. Patent No. 6,102,038 ("DeVries"). And claim 13 was rejected under 35 U.S.C. § 103(a) as being obvious over *Chalvignac* in view of *Ernst* as applied to claim 12 on page six (6) of the Office Action, further in view of U.S. Patent No. 5,735,267 ("Tobia"). Applicants respectfully traverse these rejections.

Claims 4-6, 7-11 and 13 depend from independent claims 1 and 12, respectively, and contain all the limitations thereof. For at least the reasons presented above, applicant submits that the subject dependent claims are patentable over the applied combinations, as the cited art of record does not overcome the deficiencies of *Chalvignac* and *Ernst* with regard to the independent claims.

As it is believed that all of the rejections set forth in the Office Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have. If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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